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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/883,740

06/18/2001

John G. McDonough

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11/27/2006

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EXAMINER

WARE, CICELY Q

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,740

Applicant(s)

MCDONOUGH ET AL.

Examiner

Cicely Ware

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-49 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 6-15 and 17-45 is/are allowed.
6) ☒ Claim(s) 1-5, 16 and 46 is/are rejected.
7) ☒ Claim(s) 47-49 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 9/20/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see **REMARKS/ARGUMENTS**, filed 9/20/2006, with respect to the rejection(s) of claim(s) 1 and 16 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shohara et al. (US Patent 6,473,607).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claim 1 recites the limitation "the sleep clock frequency" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1, 46 are rejected under 35 U.S.C. 102(a) as being anticipated by Shohara et al. (US Patent 6,473,607).

(1) With regard to claim 1, Shohara et al. discloses in direct sequence spread

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spectrum (DSSS) communications, a method for recovering system timing, the method comprising: disabling a reference clock during a sleep interval (col. 15, lines 35-67 – col. 16, lines 1-15); following the sleep interval, enabling the reference clock (col. 15, lines 35-67-col. 16, lines 1-15); modifying the system timing by a ratio, where the ratio is the reference clock frequency divided by the sleep clock frequency wherein the ratio is adjusted for frequency drift (col. 15, lines 35-67 – col. 16, lines 1-67, col. 17, lines 1-52, col. 19, lines 1-67 – col. 20, lines 1-10).

(2) With regard to claim 46, claim 46 inherits all the limitations of claim 1.

Shohara et al. further discloses wherein the ratio is further adjusted for quantization error (col. 19, lines 28-67 – col. 20, lines 1-10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 4, 5, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shohara et al. (US Patent 6,473,607) as applied to claim 1, in view of Storm et al. (US Patent 6,016,312).

(1) With regard to claim 2, claim 2 inherits all the limitations of claim 1. However Shohara et al. does not disclose measuring a reacquisition error; and wherein calculating the ratio includes calculating the ratio in response to the reacquisition error.

However Storm et al. discloses measuring a reacquisition error; and wherein calculating the ratio includes calculating the ratio in response to the reacquisition error (col. 1, lines 51-59, col. 8, lines 33-35, col. 9, lines 52-58).

Therefore it would have been obvious to one of ordinary skill in the art to modify Shohara et al. in view of Storm et al. to incorporate measuring a reacquisition error; and wherein calculating the ratio includes calculating the ratio in response to the reacquisition error for controlling entrance to and exit from slotted paging mode in a mobile station such as a radiotelephone (Storm et al., col. 2, lines 46-51)

(3) With regard to claim 4, claim 4 inherits all the limitations of claim 3. Storm et al. further discloses prior to disabling the reference clock, determining the number of sleep clock periods in the sleep interval; and wherein disabling reference clock during the sleep interval includes disabling the reference clock for the determined number of sleep clock periods (col. 7, lines 11-13, 40-45, 63-67, col. 8, line 1).

(4) With regard to claim 5, claim 5 inherits all the limitations of claim 4. Storm et al. further discloses wherein determining the number of sleep clock periods in the sleep interval includes determining the number of sleep clock periods using the ratio (col. 6, lines 30-52, col. 8, lines 32-35).

(5) With regard to claim 16, see rejection of claim 1. Storm et al. further discloses measuring sleep clock frequency using an initial ratio (col. 5, lines 26-42); and determining a ratio in response to a previous ratio and the current ratio (col. 8, lines 32-35).

Allowable Subject Matter

8. Claims 47-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 6-15, 17-26, 27-45 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses in a direct sequence spread spectrum communication system a method for recovering system timing. Prior art references show similar methods but fail to teach: **“the sleep clock and reference clock have nominal frequencies; wherein determining the number of sleep clock periods in the sleep interval includes multiplying the sleep interval, times the nominal reference clock frequency, times the inverse of the ratio as follows:**

$$N_{\text{sleep}} \cdot T_{\text{sleep}} = T_{\text{ref}} \cdot f_{\text{ref}} \cdot \left(\frac{1}{R} \right)$$

”, as in claim 6; “weighting the importance of the current ratio and previous ratio in response to the reacquisition error”, as in claim 17; “a controller having a third input to receive reacquisition errors”, as in claim 27; “the ratio is a frequency of the reference clock, base upon an average of the number of rising and falling edges of the reference clock, divided by the frequency of a sleep clock”, as in claim 45, along with the remaining limitations of the independent claims.

Conclusion

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11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571-272-3021. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw

November 21, 2006


MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER